

REMARKS

In response to the Office Action dated December 5, 2002, claims 1-20 are active in this application, of which claim 1, 4 and 11 are independent.

No new matters are added by this Amendment. Based on the above Amendments and the following Remarks, Applicants respectfully request that the Examiner reconsider the outstanding objections and rejections and that they be withdrawn.

New Claim

Newly added claim 20 is presented for examination. Support for claim 20 is found at least at page 16, line 7 to page 17, line 17 and also in Figure 2.

Claim Objections

The Examiner objected to claims 1-6, 8, 11, 13, and 16-18 because of informalities. Claims 1-6, 8, 9, 11, 13, 16-19 are amended to address these informalities. Claim 1 is also amended to better capture features of the present invention.

Rejections Under 35 U.S.C. §112, second paragraph

Claims 1-3, 12 and 19 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter. Applicants traverse these rejections as follows.

Claim 1 has been amended to recite only one electromagnetic signal. Claims 2 and 3 now depend on an allowable claim 1.

The Examiner has stated that claim 12 and claim 16 has no antecedent basis for “the converting means” in lines 2 and/or 3. Applicant respectfully disagrees and draws the Examiner’s attention to claim 11 (from which claim 12 and 16 depends) which does recite “converting means...” in the first element of claim 11.

Claim 18 and claim 19 are amended to recite a “second modifying means” to clarify to which “modifying means” these claims refer.

Since all the 35 U.S.C. §112, second paragraph rejections have been addressed or rendered moot, Applicants now requests withdrawal of the 35 U.S.C. §112, second paragraph rejections.

Obligations Under 37 CFR 1.56

Applicants believe that the subject matter of various claims was commonly owned at the time of invention.

Rejections Under 35 U.S.C. §103

In the Office Action, claims 1-19 have been rejected under 35 U.S.C. §103(a) for being unpatentable over U. S. Patent No. 6,009,336 issued to Harris *et al.* (“Harris”) in view of U. S. Patent No. 6,038,257 issued to Brusewitz, *et al.* (“Brusewitz”). This rejection is respectfully traversed.

In order to reject a claim under 35 U.S.C. §103(a) there must be some suggestion or motivation, either in the reference themselves or in knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings.

Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claimed limitations.

Present Invention

The present invention in embodiments is directed to a digital still camera capable of communicating by means of a wireless telephone system. The invention comprises a microphone 2, a speaker 3, a camera lens 5 for displaying a still image on a display device 4. As shown in Figure 2, the invention has a means for converting an optical image into a digital image signal, e.g., camera 10, and a means for transmitting the signal, e.g., exchanger 11, to a designated remote device in accordance with a wireless telephone system. Also included is a means for receiving the electromagnetic signal at the remote device, e.g., exchanger 11, and a means for receiving an identification signal from the remote device, e.g., receiving unit 40, that is transmitted back in response to the designation of the remote device. The present invention includes a means for reducing the number of pixels of a still image, e.g., modification unit 41, when the identification signal is received or not reducing the number of pixels when the identification signal is not received. The present invention also provides a controlling means, e.g., control unit 20, for controlling a displaying means for displaying in a first mode or a second mode in response to a first or a second type of electromagnetic signal.

Harris Reference

The Harris invention is directed to a communication device 104 including two housings 108 and 110 each containing circuitry for operating the communication device over

a communication link 106. The communication device 104 can be a wireless device and includes power supplies 104 and radio circuitry 114. The communication device contains DSPs for image 152, for speech 130, a RF transceiver 126, modem channel 128, and a CCD camera 188.

As admitted by the Examiner, Harris does not provide any means for reducing the number of pixels of the still image. Additionally, the Examiner has also stated that Harris provides a "...an electromagnetic signal containing an identification signal to be transmitted back in response to the designation of said remote device (col.2 line 55- col. 12 line 37)". Applicants respectfully disagree. Applicants have examined the extensive citation of Harris and have found no such feature taught or suggested by Harris and required by claim 1 of the present invention. In fact, no such feature is found anywhere in Harris and further it appears that Harris even teaches away from this feature at col.12, lines 5-30 wherein the user is necessary to manually instigate video mode via keys, i.e., 133 and 135 of Figure 13. There is no exchange of information between devices regarding the nature of video signals and no indication at all of controlling displaying means in modes based on types of electromagnetic signals as required by claim 4 of the present invention. Further, since Harris does not teach or suggest receiving an identification signal back from a remote device, it necessarily follows then that Harris cannot teach or suggest reducing a video image in response to the identification signal as required by claim 1. Additionally, Harris does not teach "reducing means for reducing the number of pixels of a still image" and "transmitting means for transmitting the electromagnetic signal representing the still image signal of fewer pixels" as required by claim 11.

Brusewitz Reference

Brusewitz is directed to an imaging system 6 and method for alleviating perceptual problems associated with transmission and displaying of high resolution still images on a video system. The imaging system includes a sending device 8, which receives signals from a camera 10. The optical image is converted to an analog video signal by sub-sampler 14 which determines spatial resolution. An encoder 16 encodes the image data into video signal stream which flows into buffer 17. A controller 18 controls operation of the imaging system 6. The buffer 17 regulates data from encoder 16 across a transmission channel 20 to a receiver device 22 to another buffer 23 which forwards the image data to a decoder 24 that interprets the format of the data. The receiver also includes a human interface device 30 through which a human may request operational parameter changes.

As was with the case of Harris, Brusewitz does not teach or suggest anywhere the use of “means for receiving from said remote device an identification signal transmitted back in response to the designation of said remote device” as recited by claim 1 of the present invention. Additionally, Brusewitz, again like Harris, does not teach or suggest “controlling means for controlling said displaying means in a first mode in response to a first type of said electromagnetic signal and in a second mode in response to a second type of said electromagnetic signal,” as recited by claim 4 of the present invention.

Furthermore, and contrary to the Examiner’s assertion, Brusewitz also does not teach or suggest “reducing the number of pixels of a still image prior to transmission” as recited by claims 1, 11. The citation provided by the Examiner (Figs. 1-3, device 8 and cols. 2, line 54-col 8 line 12) does not deal with reducing the pixel counts of a still images, but rather of images encased in video mode. Brusewitz is dealing with a video system that inherently has

difficulties displaying a “still image”, i.e., video image frames require much less bits than a high resolution still image (see col. 5, lines 26-42). Therefore when a user requests a “still image,” special processing occurs to attempt to provide a “still image” in video format. A review of the flowchart of Figure 2 shows the steps provided by Brusewitz. In the flow chart, a low-resolution image is created (step 56) and encoded in video mode at step 58, which is then transmitted at step 60. Then a high-resolution image in still mode is also transmitted at step 62. Note that no low resolution image in still mode is ever transmitted. A low image is always transmitted in video mode, never in still mode. Further, looking at Figure 3, it can be seen that the low-resolution image is converted to still mode (at step 84) only after it has been received at the receiving end. A still image is never reduced in pixel counts and then transmitted by Brusewitz. Claim1 of the present invention recites “transmitting means for transmitting an electronic signal...containing a still image...” and further “...reducing the number of pixels of the still image prior to transmission...” Claim 11 recites “reducing means for reducing the number of pixels of a still image prior to transmission” and “transmitting means for transmitting the electromagnetic signal representing the still image signal of fewer pixels”. Brusewitz does not teach or disclose these limitations.

Therefore, since neither Brusewitz nor Harris teach or suggest all the limitations of the claimed invention and it would not be obvious to one skilled in the art, Applicant submits that the Examiner has failed to establish a *prima facie* case for obviousness. Further, there is no suggestion to modify Harris with the teachings of Brusewitz since Brusewitz does not supply the missing elements of Harris as stated above.

Since all dependent claims depend from allowable respective independent claims, applicant submits that the dependent claims recite patentable subject matter and are also allowable.

CONCLUSION

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete response has been made to the outstanding Office Action and, as such, claims 1-20 are in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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APPENDIX

The "marked-up" version of the amended claim is as follows:

1. A digital still camera comprising:
 - means for converting an optical image into a digital image signal;
 - transmitting[receiving] means for transmitting an electromagnetic signal to a designated remote device accessible in accordance with a wireless telephone system, the electromagnetic signal containing a still image represented by the digital image signal;
 - means for receiving from said remote device [an electromagnetic signal containing] an identification signal [to be] transmitted back in response to the designation of said remote device;
 - modifying means for modifying the electromagnetic signal into a digital [electronic] image signal; [and]
 - reducing means for reducing the number of pixels of the still image represented by said digital electronic image signal prior to transmisison and in response to the identification signal; and
 - means for [transmitting]receiving the electromagnetic signal [to]at the designated remote device.
2. The digital still camera of claim [2]1, wherein the reducing means is inoperative when the receiving means fails to receive the identification signal transmitted

from the remote device, whereby the modifying means forms a digital image signal without reducing the number of pixels of the still image.

3. The digital still camera of claim 1, wherein the reducing means further reduces the time of transmitting one frame of the [digital]still image.

4. A digital still camera comprising:
converting means for converting an optical image into a digital electronic image signal;

receiving means for receiving an electromagnetic signal;
modifying means for modifying the electromagnetic signal into a digital electronic image signal;
displaying means for alternatively displaying a still image on the basis of the digital electronic image signal from the converting means or from the modifying means; and

controlling means for controlling said displaying means in a first mode in response to a first type of said electromagnetic signal and in a second mode in response to a second type of said electromagnetic signal.

5. The digital still camera of claim 4, wherein the first type of said electromagnetic signal represents a still image having fewer pixels than a still image represented by the second type of said electromagnetic signal.

6. The digital still camera of claim 5, wherein the time required to transmit one frame of the still image represented by the first type of said electromagnetic signal is shorter than the time required to transmit one frame of the still image represented by the second type of said electromagnetic signal.

8. The digital still camera of claim 7, wherein the displaying means comprises fewer pixels than the still image represented by the second type of said electromagnetic signal[,].

9. The digital still camera of claim 8, wherein the displaying means comprises the same number of pixels as first type of electromagnetic signal[,].

11. A digital still camera comprising:
converting means for converting an optical image into a digital electronic image signal;
modifying means for modifying [the]an electromagnetic signal into a digital electronic image signal in accordance with a wireless telephone system;
reducing means for reducing the number of pixels of [the]a still image prior to transmission; and
transmitting means for transmitting the electromagnetic signal representing the still image signal of fewer pixels.

13. The digital still camera of claim 12, further comprising extracting means for extracting portions of the digital electronic image signal in the storing means such that the

remaining digital image signal has the same number of pixels as that of the still image signal represented by the electromagnetic signal.

16. The digital still camera of claim 11, further comprising displaying means for displaying a still image on the basis of the digital electronic image signal from the converting means, the number of pixels of the displaying means being substantially equal to that of the still image signal represented by the electromagnetic signal.

17. The digital still camera of claim 16, further comprising means for storing the digital electronic image signal from the converting means, the number of pixels of the still image in the storing means being greater than that of the still image signal represented by the electromagnetic signal.

18. The digital still camera of claim 16, further comprising means for receiving an electromagnetic signal and second means for modifying the received electromagnetic signal into a digital electronic image signal indicative of a still image, wherein the displaying means is capable of alternatively displaying [a]the still image on the basis of the digital electronic image signal from the converting means or from the second modifying means.

19. The digital still camera of claim 18, wherein the number of pixels of the still image from the second modifying means is substantially equal to that of the still image displayed by the displaying means[.]